

Chapter 1

Major Initiatives

Fulfilling its commitment to accelerate the pace of Superfund cleanup, the Agency completed construction activities to place 68 National Priorities List (NPL) sites in the construction completion category during FY93, bringing the total number of sites in the category to 217. Exhibit 1.0-1 illustrates the Agency's progress in completing construction activities at NPL sites. Of the sites in the construction completion category, 72 percent achieved the classification within the last two years, more than tripling the number of such sites as of the end of FY91.

To review the program and identify improvements that could be made within the existing statutory and regulatory framework, the EPA Administrator formed the Administrative Improvements Task Force in April 1993. The task force included representatives from EPA's Offices of Solid Waste and Emergency Response; Enforcement; General Counsel; Policy, Planning, and Evaluation; Administration and Resources Management; and Research and Development. Representatives from EPA Regions 2, 5, 9, and the Department of Justice also participated in the task force. In its final report, issued on June 23, 1993, the task force recommended 17 areas for improvement in the program. The 17 recommendations, illustrated in Exhibit 1.0-2, included nine new or enhanced initiatives and eight continuing initiatives. The nine new or enhanced initiatives center around four themes:

- Promoting enforcement fairness and reducing transaction costs;
- Enhancing clean-up effectiveness and consistency;

- Fostering increased community involvement; and
- Strengthening the role of states.

The following sections of this chapter detail the fiscal year activities under each of these four themes. Progress being made under continuing initiatives is highlighted in this chapter and throughout this Report.

1.1 PROMOTING EQUITY IN ENFORCEMENT AND REDUCING TRANSACTION COSTS

Through effective use of the enforcement authority provided in CERCLA and SARA, EPA has reached settlements with potentially responsible parties (PRPs) for response work at Superfund sites cumulatively worth more than \$8.5 billion. PRPs financed approximately 80 percent of the remedial actions started in the fiscal year.

Settlement negotiations or litigation, however, can be lengthy and may result in substantial transaction costs for PRPs. To reduce transaction costs and ensure equity in enforcement, EPA undertook efforts to foster greater use of allocation tools, reach more and earlier settlements under Section 122(g) with small volume waste contributors, ensure fairness for owners of Superfund sites, and evaluate the use of mixed funding for clean-up activities. An overview of these efforts is outlined below. (A more detailed discussion may be found in Chapter 5.)

Acronyms Referenced in Chapter 1	
ATSDR	Agency for Toxic Substances and Disease Registry
ADR	Alternative Dispute Resolution
DNAPL	Dense Non-Aqueous Phase Liquid
IGCE	Independent Government Cost Estimate
NACEPT	National Advisory Council for Environmental Policy and Technology
NPL	National Priorities List
PRP	Potentially Responsible Party
RDT	Regional Decision Team
RIFS	Remedial Investigation/Feasibility Study
RPM	Remedial Project Manager
SACM	Superfund Accelerated Clean-Up Model
SI	Site Inspection
SVE	Soil Vapor Extraction
TAG	Technical Assistance Grant
VOC	Volatile Organic Compound

1.1.1 Fostering Greater Use of Allocation Tools

A key factor that prolongs negotiations or litigation and results in high transaction costs is allocating clean-up costs among PRPs. To facilitate cost allocation, EPA has encouraged greater sharing of information and increased use of settlement tools for allocating costs.

For example, the Agency adopted a new policy to encourage the exchange of information for allocation and liability issues. In a July 1993 memorandum, the Agency encouraged the Regions to facilitate information exchange with PRPs by assisting with information gathering activities.

To facilitate clean-up cost allocation, EPA began developing guidance on criteria to be considered in developing an allocation scheme. The Agency also encouraged increased use of alternative dispute resolution (ADR), a technique in which a neutral party helps organize negotiations, facilitates deliberations, and/or provides negotiating parties with an impartial opinion. During FY93, EPA identified 20 sites at which ADR will be demonstrated.

1.1.2 Fostering More Settlements with Small-Volume Waste Contributors

Typically, the larger the number of PRPs involved in negotiations or litigation, the greater the transaction costs. To reduce the number of PRPs involved in prolonged deliberations, EPA has worked to promote early settlements under Section 122(g) with small-volume (*de minimis* and “de micromis”) waste contributors. When many small-volume contributors settle early in the process, only a limited number of PRPs must participate in the later, more intensive negotiations. Those that remain are primarily large-volume contributors.

In July 1993, the Agency released guidance to aid the Regions in reaching *de minimis* and “de micromis” settlements. During the fiscal year, EPA successfully reached 43 *de minimis* settlements involving more than 1,500 PRPs at 30 sites. The Agency plans to offer *de minimis* and “de micromis” settlements to PRPs at additional sites in FY94.

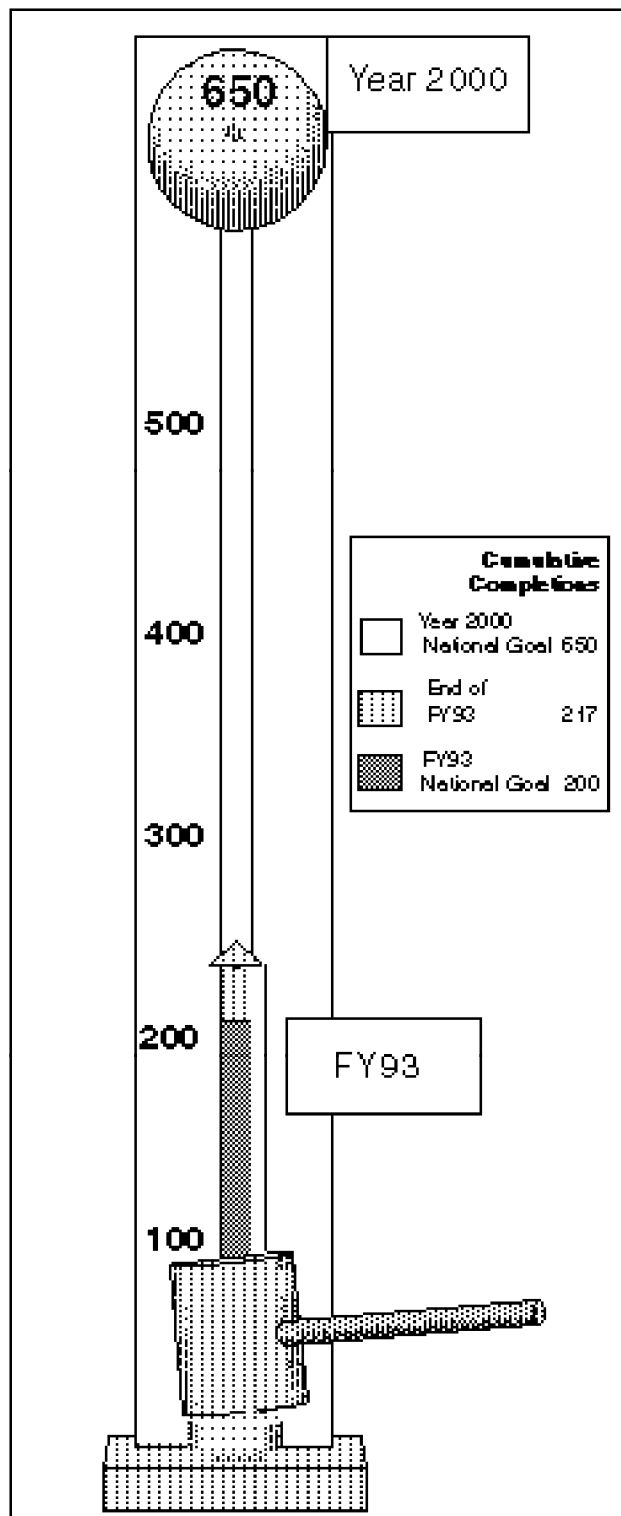
1.1.3 Fostering Greater Fairness for Owners of Superfund Property

In addition to efforts to reduce transaction costs, EPA sought to promote greater fairness in Superfund enforcement.

In July 1993, EPA issued federal lien guidance to clarify its procedures for filing a lien on a Superfund site to secure reimbursement of Trust Fund monies expended in response actions at the site. The guidance, *Supplemental Guidance on Federal Superfund Liens*, outlines procedures for providing property owners with sufficient notice and an opportunity to comment on pending federal Superfund liens on their properties. Property owners will be notified of the Agency’s intention to file a lien and may comment by either submitting written documentation or attending an informal meeting with EPA.

In other action related to property ownership, EPA began developing guidance that would update existing Agency policy dealing with the use of

Exhibit 1.0-1
Progress in Classifying Sites
as Construction Completions



Source: Office of Emergency and Remedial Response/
 Office of Program Management and Hazardous Site
 Control Division.

covenants not to sue in agreements with prospective purchasers of Superfund property. Frequently, prospective purchasers of Superfund properties are willing to finance or undertake a portion of the cleanup in return for a covenant not to sue from EPA. The United States can grant such a party a covenant not to sue which provides assurance that the United States will not bring an action for further cost recovery or response action against such a party. EPA's experience with covenants not to sue has shown that they conserve Trust Fund monies and encourage the redevelopment of an otherwise vacant property. Such covenants are particularly beneficial in the case of "brownfields," which are potentially contaminated properties that have been left unused due to the risk of future liability to prospective purchasers, developers, and lenders. In FY94, EPA will evaluate the application of other mechanisms to remove barriers to property development.

1.1.4 Evaluating Mixed Funding Policy

Although EPA aggressively works to have PRPs pay 100 percent of response costs, circumstances exist where response work may be financed by both EPA (from the Trust Fund) and PRPs. Using the Trust Fund to finance a portion of clean-up costs can encourage viable PRPs to reach an agreement with EPA to finance the remaining portion of the clean-up costs.

EPA uses three types of mixed funding approaches in negotiating agreements with PRPs:

- *Preauthorization*: PRPs perform the work and EPA reimburses them for a portion of the costs;
- *Cashouts*: PRPs fund a portion of the work performed by EPA; and
- *Mixed Work*: PRPs and EPA each perform different aspects of cleanup.

During FY93, the Agency conducted a two-part evaluation of the use and effectiveness of mixed funding. As part of the evaluation, EPA estimated the potential cost of mixed funding alternatives and options for streamlining the decision-making process.

Exhibit 1.0-2
Administrative Improvements

New and Enhanced Initiatives	
1.	Greater Use of Allocation Tools
2.	Foster More Settlements with Small Volume Waste Contributors
3.	Greater Fairness for Owners at Superfund Sites
4.	Evaluate Mixed Funding Policy
5.	Streamline and Expedite the Cleanup Process
6.	Develop Soil Screening Levels
7.	Implement an Environmental Justice Strategy for Superfund Sites
8.	Early and More Effective Community Involvement
9.	State Deferral of Certain Site Categories
Continuing Initiatives	
10.	Implement the Superfund Accelerated Clean-Up Model (SACM)
11.	Achieve Construction Completions
12.	Improve Contracts Management
13.	Emphasize Enforcement First
14.	Accelerate Cleanup at Base Closures
15.	Promote Use of Innovative Technology
16.	Enhance Compliance Monitoring
17.	Improve the Effectiveness of Cost Recovery

Source: Office of Solid Waste and Emergency Response.

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In July 1993, EPA identified sites for pilot testing the use of mixed funding and will initiate the projects in FY94. A further discussion of mixed funding approaches is provided in Chapter 5 of this Report.

1.2 ENHANCING CLEAN-UP EFFECTIVENESS AND CONSISTENCY

As recommended by the Administrative Improvements Task Force, the Agency undertook a variety of efforts to enhance clean-up effectiveness and consistency. Efforts focused on developing measures to streamline and standardize cleanup and on establishing standardized soil screening levels.

1.2.1 Streamlining and Standardizing Cleanup

The Agency engaged in efforts to implement innovative approaches for streamlining and standardizing cleanup, including the Superfund Accelerated Clean-Up Model (SACM) and the use of presumptive remedies. The Agency also addressed specific areas of concern, such as technical complexities associated with dense non-aqueous phase liquid (DNAPL) contamination in ground water.

To streamline cleanups, the Agency continued efforts to implement SACM, the new process proposed for Superfund cleanups. SACM accelerates cleanup and risk reduction at Superfund sites by consolidating site assessment functions into a one-step process, abbreviating clean-up time frames, using presumptive remedies where appropriate, and addressing the worst threats to human health and the environment first. Section 1.6.4 of this Report provides additional information on the components of SACM and efforts underway to implement the new clean-up model.

To standardize remedy selection for specific types of sites, the Agency is developing presumptive remedies. Continuing efforts begun in 1991 in response to the 30-Day Study, the Agency issued guidance for presumptive remedies for municipal landfill sites and sites with soil contaminated by volatile organic compounds (VOCs). The guidance identifies patterns in site characteristics that can be

used to identify the most appropriate presumptive remedy. By reviewing remedies at similar sites, EPA can identify typical technologies or remedies that can be applied to sites exhibiting particular characteristics. The guidance will enable EPA and PRPs to focus data collection and limit feasibility studies to remedial options that are most appropriate. During FY94, the Agency will pilot test the presumptive remedies for municipal landfill sites and sites with soil contaminated by VOCs. The Agency will also continue developing presumptive remedies for other types of sites.

In other efforts, the Agency continued to evaluate technical solutions to address the pervasiveness of DNAPL contamination in ground water. Historically, because of the complex nature of DNAPLs, their presence went undetected during site characterization. During the year, EPA developed a methodology for quickly assessing the presence of DNAPLs, characterizing site contamination problems, and addressing DNAPL contamination through remedial design. In addition, EPA conducted technology transfer sessions for over 2,550 federal and state employees to increase their understanding of the issue. DNAPL evaluation activities will allow EPA to increase the consistency and quality of decisions regarding DNAPL contamination, help focus data collection, and assist in evaluating hazardous waste sites with DNAPL contamination that are not currently on the NPL.

1.2.2 Developing Soil Screening Levels

Because few federal or state soil clean-up levels for specific pollutants have been established, the need for and extent of cleanup of soil has historically been determined on a site-by-site basis. To facilitate defining the extent of site study required to make these determinations, the Agency continued efforts to develop soil screening levels. In FY93, EPA solicited comment on draft guidance proposing screening levels for the 30 top-priority chemicals found at Superfund sites. The screening levels establish contaminant-concentration levels below

which there is no concern about a threat to human health or the environment and above which further site-specific evaluation of the potential threat is warranted. In some cases, the soil screening levels may also serve as the clean-up levels. During FY94, EPA plans to develop soil screening levels for approximately 60 additional compounds and field test the soil screening levels at pilot sites.

1.3 ENHANCING COMMUNITY INVOLVEMENT

As recommended by the Administrative Improvements Task Force, EPA worked to increase community involvement in Superfund cleanups and ensure environmental justice for minority and low-income communities. It is critical that citizens living in direct proximity to hazardous waste sites be aware of and involved in the clean-up process so that their needs and expectations are clearly articulated and considered. In addition, working with communities puts the Agency in a better position to accomplish effective implementation of clean-up remedies.

1.3.1 Efforts to Facilitate Community Involvement

The Agency undertook a number of activities during the year to encourage citizens to take a more active role in Superfund activities. The Agency identified and exchanged information about sites and projects where the community has been involved successfully, or innovative community involvement techniques have been used. The Agency also identified 16 sites to demonstrate innovative community involvement techniques. To solicit citizens' ideas, the National Advisory Council for Environmental Policy and Technology (NACEPT) held a national meeting on community involvement.

The Agency also began preparing a new Superfund public participation plan. This plan will address aspects of cleanups that are important to communities, such as the speed of cleanup, economic redevelopment of property, and ecological restoration

of natural resources. The plan will also discuss the implementation of an information-availability policy, alternatives to the Technical Assistance Grant (TAG) program, the role of the Agency for Toxic Substances and Disease Registry (ATSDR), and ways to ensure better community representation in Superfund decision making.

Throughout the year, Regions successfully involved citizens and furthered communications through a variety of innovative community involvement techniques:

- Region 1 organized a mediation session between the public and PRPs cleaning up the Pine Street Canal site, which is located in Burlington, Vt.
- Region 2 accelerated the remedy selection process for the Li Tungsten site through its efforts to involve the community during the remedial investigation and feasibility study (RI/FS). Also, the Region tailored outreach activities to involve the St. Regis Mohawk Indian tribe in Superfund activities, including a newsletter specifically developed for affected tribal members.
- Several Regions developed teams to provide technical assistance to communities. Region 3 formed a site team to expedite the flow of remediation data to the public at the Hyman Viewner site. Similarly, at the Savannah River site and the Oakridge Reservation site, Region 4 established Site-Specific Advisory Boards, which serve as local citizen working groups. At the ASARCO Smelter site, Region 10 convened a coordinating forum, which has examined preliminary RI/FS data and will assist in involving the community in remedy selection and decisions on future land use.
- Region 5 held an industrial outreach day to facilitate understanding between the public and private business interests.
- Region 6 broadcasted public service announcements at several sites to expand awareness of the Superfund program's achievements and goals.
- Region 7 developed environmental education programs about Superfund and other EPA

programs at the Hastings Ground-Water Site.

- Region 8 began a communication dynamics study that will result in a report on communication options.
- Region 9 developed a communication strategy for the Ralph Gray Trucking site. The Region 9 strategy consists of two phases: the first phase is a community outreach program while the second phase involves the development of bilingual communication tools to assist in the relocation process, such as a toll-free telephone line.

EPA coordinated its community involvement efforts with other federal agencies and departments involved in Superfund cleanup. Efforts included establishing Site-Specific Advisory Boards to foster community involvement at several Department of Energy Superfund sites during the year, such as those mentioned above in Region 4. During FY94, EPA plans to establish Restoration Advisory Boards for citizens at several Department of Defense sites.

1.3.2 Ensuring Environmental Justice

Studies have indicated that low-income communities and minority groups may be exposed to greater health risks from environmental hazards than the general population. The increased risks have been attributed to disproportionate exposure to industrial pollution, vehicle emissions, hazardous waste sites, and lead-based paint. During FY93, the Agency began developing an environmental justice strategy to ensure that risks to low-income communities and minority groups are equitably addressed. Steps in developing the environmental justice strategy included

- Analyzing the impact of 158 NPL sites on minority and disadvantaged communities and publishing, in August 1993, the results in a report titled *Preliminary Analysis of Population Demographics*;
- Conducting a national meeting sponsored by NACEPT to hear citizens' concerns about environmental justice;
- Sponsoring environmental justice and

community involvement sessions in public forums under the Superfund Revitalization Conferences sponsored by the Superfund Revitalization Office in Chicago, San Francisco, Dallas, and Washington, D.C.; and

- Identifying 21 Regional demonstration projects for environmental justice action.

To assist low-income communities and minority groups in accessing technical support in understanding the potential health risks posed by environmental hazards, the Agency simplified the TAG application and issued a pamphlet and fact sheet about the TAG program. To promote education about the health risks posed by environmental hazards, EPA sponsored a Superfund Training Institute for teachers who live near Superfund sites.

The Agency also analyzed environmental justice case-studies to identify opportunities for coordinating with the Department of Housing and Urban Development, the Department of Labor, and ATSDR. Future plans include conducting and evaluating additional Regional demonstration projects, publishing TAG materials in languages other than English, and developing and issuing a complete environmental justice strategy for Superfund sites.

1.4 ENHANCING THE ROLE OF STATES

As recommended by the Administrative Improvements Task Force, the Agency took steps to expand the role of states in Superfund cleanups. State participation is critical because EPA alone cannot address all of the hazardous waste sites that may need remediation. Also, states may help to prevent clean-up delays that could occur if EPA retains sole responsibility for assessing and cleaning up sites.

EPA has historically supported states in developing their Superfund programs by providing funding and technical assistance. With EPA's support, many states have implemented clean-up programs to address non-NPL-caliber sites, and significant numbers of non-NPL sites have been or are being cleaned up. Because of the success of these cleanups,

the Agency began expanding the state role in FY93 to include responsibility for NPL-caliber sites.

The Agency's program to defer NPL-caliber sites from listing on the NPL is another method of enhancing the role of states. Deferring sites from listing on the NPL is intended to encourage qualified, interested states and Indian tribes to address, under their own laws, the large number of sites now under consideration for listing on the NPL. Through agreements with EPA, states and Indian tribes would be responsible for selecting, compelling, and overseeing response actions conducted and funded by PRPs. The Agency believes that this program will accelerate cleanup, minimize the risk of duplicative state/federal efforts, and offer PRPs a measure of confidence that only one agency will oversee a deferred site. Once the necessary response actions at a site are completed successfully, the site will not be considered for listing on the NPL unless EPA receives new information of a release or potential release that poses a significant threat to human health or the environment.

EPA is developing a guidance document that outlines the deferral process and establishes two sets of deferral criteria. States must meet one set of criteria to qualify for the deferral program; specific sites must meet another set to retain deferral eligibility. The guidance will also contain other requirements that address cleanup standards, procedural requirements, community involvement, oversight, and financial assistance.

Complementing efforts to develop the deferral guidance, EPA is piloting the deferral program at 24 NPL-caliber sites in seven states. Experiences at these sites will be monitored to help identify and resolve issues quickly.

1.5 PREPARING FOR REAUTHORIZATION OF CERCLA

While implementing administrative improvements to Superfund, the Agency also prepared for the reauthorization of CERCLA. To identify and

recommend possible legislative improvements, the Administrator created the Superfund Evaluation Committee as a subcommittee of NACEPT; formed Agency legislative workgroups and subgroups; and convened an interagency task force.

1.5.1 National Advisory Council on Environmental Policy and Technology

In June 1993, the Administrator created the Superfund Evaluation Committee as a subcommittee of NACEPT. (NACEPT was formed as an advisory committee to the Administrator on environmental issues.) Appointees to the committee reflect the broad spectrum of Superfund stakeholders, including representatives from industry, government, and the environmental community.

The Administrator tasked the Superfund Evaluation Committee to

- Review the current performance of the Superfund program;
- Identify the concerns of affected constituencies about the program's operations;
- Identify possible administrative and legislative improvements in the program; and
- Assess the advantages and disadvantages of the proposed improvements.

During a series of meetings held throughout the fiscal year, the NACEPT Superfund Evaluation Committee examined the structure and goals of the Superfund program. The committee considered specific issues, such as clean-up standards and technologies, the benefits and drawbacks of the Superfund liability scheme, the role of the states in cleanups, the impact on communities when municipalities are PRPs, the participation of local communities in clean-up efforts, concerns about environmental justice, economic redevelopment of contaminated properties, and voluntary cleanups by PRPs. In the meetings, which were open to the public, the committee accepted written comments and oral presentations from interested parties. To further foster community involvement, the

committee's final meeting was broadcast and satellite uplinks were provided to the 10 EPA Regions. The committee plans to deliver a report containing its conclusions in FY94.

1.5.2 Interagency Workgroups

To examine federal facility site cleanup and propose possible legislative changes, EPA convened an interagency task force in July 1993. EPA's Deputy Administrator chairs the task force, which consists of representatives from EPA, most cabinet agencies, the White House, and the Office of Management and Budget. The interagency task force formed four subcommittees to examine potential issues for the upcoming reauthorization of Superfund:

- Federal facility cleanups;
- Natural resource damage;
- General legislative options; and
- Urban economic redevelopment.

The first two subcommittees are extensions of existing interagency workgroups, and the Legislative Options Subcommittee is an interagency counterpart to EPA's legislative task force. The interagency task force is scheduled to present Superfund reauthorization recommendations in FY94.

1.6 CONTINUING INITIATIVES

EPA has also continued efforts begun in previous fiscal years to improve the effectiveness and efficiency of Superfund. These efforts included proceeding with implementation of SACM, focusing on clean-up activities to achieve construction completion at sites, ensuring effective management of contracts, and promoting consistency in assessing and managing risk.

1.6.1 The Superfund Accelerated Clean-Up Model

EPA continued efforts to pilot test SACM during the year, anticipating full implementation of the new

clean-up model in FY94 when the Agency will issue *Expectations for Full Implementation of SACM*. SACM accelerates cleanup and risk reduction at Superfund sites by consolidating site assessment functions into a one-step process and by prioritizing action to address the worst threats to human health and the environment first. Exhibit 1.6-1 illustrates the clean-up process under SACM. The components of the SACM and the fiscal year efforts taken to implement the model are described below.

Early and Long Term Actions

SACM distinguishes two types of clean-up actions, “early actions” and “long-term actions.” Early actions are aimed at addressing immediate threats to the health and safety of the surrounding population and environment. Early actions may include the removal of soil and waste, the prevention of access to contaminated areas, the capping of landfills, the relocation of people, and the provision of alternative drinking water sources. Early actions will typically average no more than three-to-five years in duration.

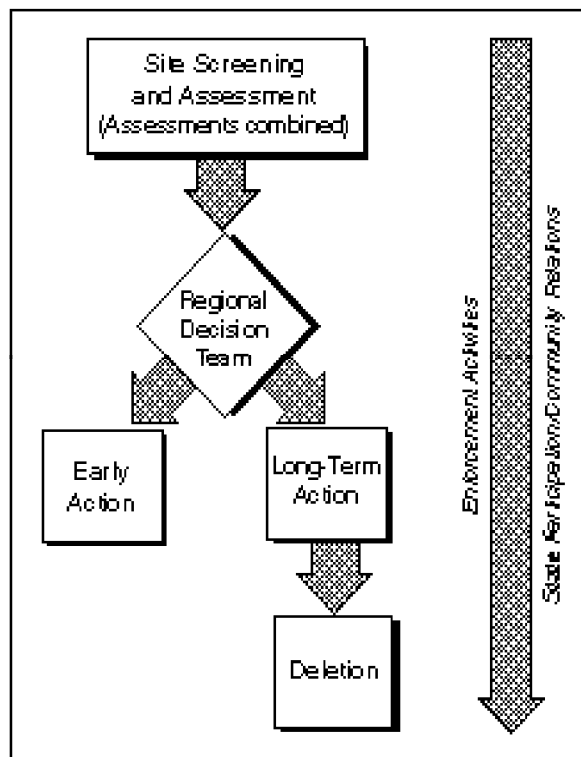
Long-term actions encompass remedial activities such as ground-water restoration, remediation of mining areas, extended incineration, and wetland/estuary restoration. Long-term actions may require many years, and sometimes decades, to complete.

To determine whether early actions and/or long-term actions are necessary, SACM calls for creation of Regional decision teams (RDTs). The RDTs, composed of personnel from across program areas, will recommend appropriate action for each site.

Single Site Assessment Process

SACM will reduce the time and cost of cleanup by consolidating site studies into a single, continuous, site assessment process. The process combines the preliminary assessment, which consists of researching the existence of a potential threat, and the site inspection, which consists of sampling to assess a potential threat. At sites where a threat exists, remedial investigation data will be collected providing information needed for both early and long-term actions. The model also focuses on the early involvement of states and PRPs in the effort to

Exhibit 1.6-1
Superfund Accelerated Clean-Up Model



Source: Office of Emergency and Remedial Response. 51-037-14

eliminate multiple site assessments.

Implementation Efforts

The Agency undertook a variety of projects to pilot SACM during the year. All 10 Regions established RDTs to prioritize sites and recommend appropriate actions. Also, site assessments were integrated, early actions were taken, and appropriate long-term clean-up actions were chosen.

The Agency conducted SACM pilots at 34 sites during FY93, accomplishing cleanup at more than half of the sites by the end of the year. Exhibit 1.6-2 highlights accomplishments achieved under several of the pilots. The pilots have demonstrated benefit to the Superfund program by

- Accelerating Superfund cleanup and improving efficiency;
- Improving enforcement equity; and
- Increasing the role of states.

These benefits were consistent with the goals established by the Administrative Improvements Task Force. Also, EPA will attempt to use the pilots to increase community involvement, motivate early PRP involvement, and ensure that data collection and quality objectives are met at all stages of cleanup.

In the upcoming fiscal year, EPA will work to share information with states to ensure that SACM principles are being applied; specify SACM as standard operating procedure at all Superfund sites; and provide cross-training to On-Scene Coordinators, Remedial Project Managers (RPMs), and Site Assessment Managers. The Agency also will continue its efforts to specify data quality objectives for integrated site assessments, use presumptive remedies at appropriate sites, provide constructive notice to PRPs, and perform early actions at NPL and non-NPL sites to rapidly reduce risk and expedite cleanup.

1.6.2 Achieving Construction Completions

Aggressively pursuing progress at Superfund sites, the Agency completed construction activities to place the 217th NPL site in the construction completion category. Fiscal year progress included completing activities to place 68 sites in the construction completion category. The total number exceeds the 1991 30-Day Study recommendation to place 200 sites in the construction completion category by the end of FY93. The Agency plans to place at least 650 sites in the construction completion category by the year 2000, an additional target recommended in the 30-Day Study. A site in the construction completion category is

- An NPL site where all necessary physical construction activities are complete;
- A site at which EPA has determined that the response action should be limited to measures that do not involve construction; or
- A site that qualifies for deletion or has been deleted from the NPL.

To facilitate achievement of construction completions, the Agency issued several guidance

documents. The *Construction Completion Care Package* compiles all guidance and policy documents relevant to completing construction activities for RPMs.

To clarify construction completion criteria at soil vapor extraction (SVE) and bioremediation sites, EPA issued *NPL Construction Completion Definition at Bioremediation and Soil Vapor Extraction Sites*. This guidance expands on construction completion criteria to include sites undergoing *in situ* restoration activities. These sites can be categorized in the construction completion category when the treatment unit has been constructed and is operating as designed, and studies show that the technology will achieve clean-up goals. For sites in the category, follow-up work to operate the system until clean-up goals are reached may continue, but it must be minimal and limited in nature. All SVE and bioremediation sites placed in the construction completion category will also be classified as ongoing remedial actions until the site meets clean-up goals.

1.6.3 Improving Contract Management

To balance its environmental mission with effective contract management, the Agency continued actions in FY93 to monitor contractor costs and provide guidance for contract management. For example, EPA issued guidance for preparing remedial independent government cost estimates (IGCEs) in July 1993. In the document, *Guidance on Preparing Independent Government Cost Estimates*, minimum requirements regarding the roles and responsibilities of EPA personnel preparing IGCEs are established. IGCEs are used under Superfund remedial and enforcement contracts to review the contractor's work plan and budget, and to negotiate cost. The guidance emphasizes the importance of the Contract Management Team as the leader in preparing IGCEs. This team will consist of members that have interdisciplinary skills necessary to prepare the IGCEs. Generally, the team members will include the EPA Work Assignment Manager, Project Officer, Contracting Officer, and others, including contract specialists, cost estimators/coordinators, technical experts, Bureau of Reclamation personnel and/or

Exhibit 1.6-2
Superfund Accelerated Clean-Up Model Achievements

Region	Pilot Name	Benefits	Description
1	Kearsarge Metallurgical, NH	\$300,000-\$450,000 and 1-2 years saved.	Joint removal and remedial actions were able to take place at two separate operable units allowing time and cost savings to occur.
2	Accelerated Federal Facilities Agreements	1-2.5 years saved.	Early negotiations decreased time from SI to signing of the ROD.
3	Innovative Data Validation Approach	Reduced turnaround time by an average of 49 days/sample and cost by \$35/sample. Total savings of \$2 million/year.	Region developed a five-tier data validation system that decreased turnaround time and cost without sacrificing quality.
4	Site Assessment	Cost savings of \$300,000 and time savings of more than 2 years.	Different stages of the site assessment process were integrated to accelerate cleanup.
6	Lightning RODs	Cost savings of 30% and time savings of approximately 1.5 years.	Program completes all preparation for the RI/FS/RD before the site is proposed for inclusion on the NPL. Defines total site remedy in the first year. Defines responsibility for remedial action in second year after addition to NPL. Starts remedial action within three years of proposal to NPL.
8	Cross Program, Multi-Media Approach, Annie Creek, SD	Two years and \$250,000 saved.	Pilot uses alternative clean-up authority (Clean Water Act and Clean Air Act) to request information to initiate the RI. The Region saves time and money traditionally spent negotiating Superfund orders with PRPs.
10	Allied Plating, OR	16.5 months and \$500,000 saved.	A pre-ROD removal action was performed by the Army Corps of Engineers, eliminating the need for performance of an RD.

51-037-34

U.S. Army Corps of Engineers personnel. The guidance emphasizes the necessity of preparing a clearly defined statement of work before the IGCE is prepared.

EPA also began work on the *Remedial Contracts Cost Management Manual*. The manual enumerates a universal set of cost management practices and procedures for EPA personnel. The techniques presented by the manual can be employed at each step of a contractor's work assignment. Checklists and sample forms will be included in the manual to assist EPA personnel in monitoring contractor costs. The manual will be used to improve the oversight of EPA contractors without creating an unnecessary administrative burden.

1.6.4 Ensuring Consistency in Risk Assessment and Risk Management

During the fiscal year, EPA continued initiatives begun under the 1991 30-Day Study to ensure consistency in Superfund risk assessment and risk management. Risk assessment is the evaluation of

the nature and magnitude of threats to human health and the environment that result from exposure to hazardous substances. To target improvements for risk assessments, a review of Agency-wide risk characterization practices was performed in 1992. The Risk Assessment Council, responsible for the review, published their findings in *Guidance on Risk Characterization for Risk Managers and Risk Assessors*. The Agency began adopting the council's findings in FY92, and continued these efforts in FY93. The council's findings call for providing more thorough characterizations of risk, increasing comparability among Agency risk assessments, and highlighting the role of professional scientific judgement in risk assessment.

Risk management is the process of identifying the actions that can or should be taken to mitigate risks and determining appropriate clean-up levels. In FY92, the Superfund Risk Management Workgroup defined areas of risk management that may lead to inconsistency in decision making, and the Agency began evaluating these areas. For example, the Agency examined future land use as it affects remedy selection to help develop guidance.